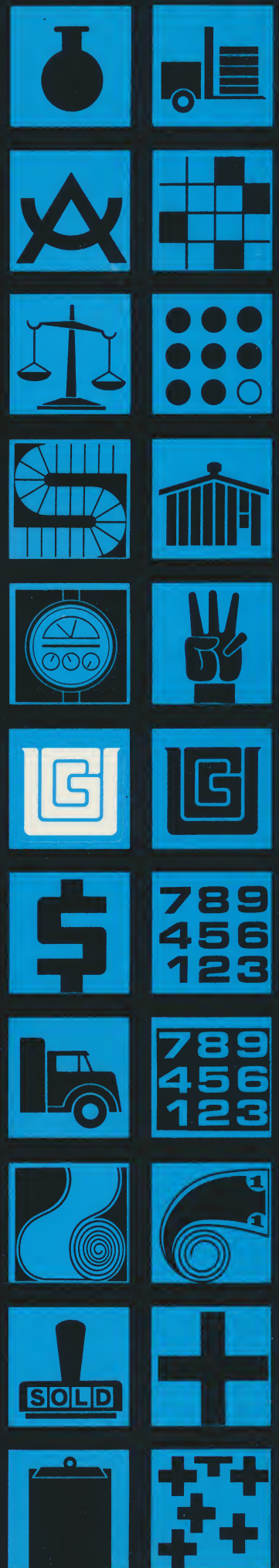


**Source
Oriented
Data
Acquisition**

S O D A



SODA—Source Oriented Data Acquisition

The System—SODA is a system designed to close the gap between source event and the computer. With SODA—you can capture data where **you** specify... virtually eliminate key punching and verifying... remove the possibility of error in transcription... enhance overall EDP payout.

Operationally, SODA system is very simple. The worker is equipped with a digital recording device with which he captures data on magnetic tape. The device may be portable or stationary.

The resultant tapes then bypass conventional intermediate conversion stages and go directly through a tape reader into the computer.

Presented in data flow diagram form, the advantages are apparent.

SODA SYSTEM

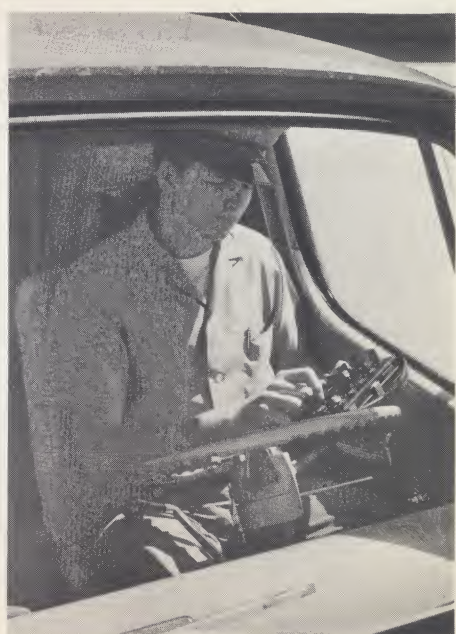
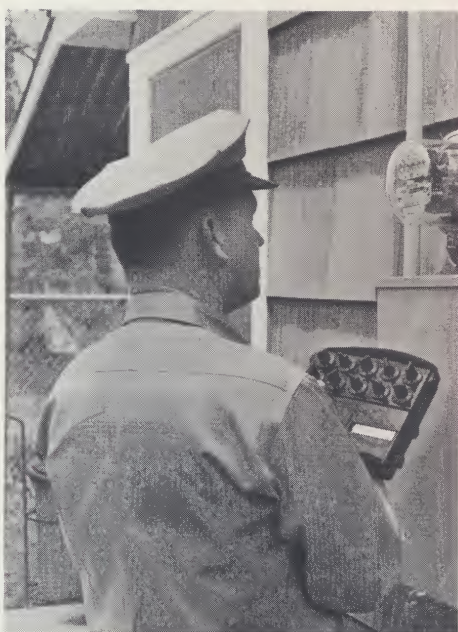


CONVENTIONAL SYSTEMS



The SODA concept and hardware evolved from the applications need within United Gas Corporation. The need for easier access to scattered data... better cost and inventory controls... and most important—faster acquisition of decision generating data.

SODA is the outgrowth of that need.



SODA: Applications Capability

From integrated manufacturing organizations to wholesale and retail chain operations, from the aerospace to the transportation and utilities industries, the applications capability of SODA is virtually limitless. Functions range from R & D labs to highway surveying. Thanks to the source oriented concept, many firms which formerly found use of electronic data processing impractical, even in computer service centers, can now achieve rapid payout on such systems by use of the SODA source acquisition concept. A few applications of this concept are outlined informally below.

OPERATIONS



Research and Development

Lab Event Recording
with SODA ADAPTCORDER



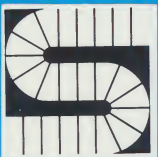
Construction, Surveying

Field engineering data
recording with portable
SODA METERCORDER



Quality Control and Inspection

Raw materials test batch data,
recording with AMCORDER



Process Control

Gauge and Meter Reading
with portable METERCORDER



Customer Meter Reading

Recording gas, water,
or electric usage with
METERCORDER

MATERIEL CONTROL



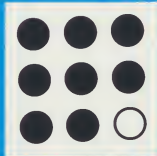
Materiel Movement Control

Shipping and Receiving data
with portable
COUNTERCORDER



Inventory Taking

Identification and tally
with portable METERCORDER



Stores Requisitioning

Transaction data with
AMCORDER Adding Machine



Field Reorder Reporting

Store and warehouse audits
METERCORDER or
COUNTERCORDER

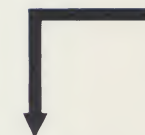


Purchasing Control

Buying activity reporting
with AMCORDER



DATA PROCES



**Top
Management**



Critical and innovative
decision making from
operating summaries

MERCHANDISING CONTROL



Cash Receipts

Cash register entries by
ADAPTOCORDER



Route Sales Transactions

Delivery transaction reports
with COUNTERCORDER or
METERCORDER



Sales Ticket Control

Recording and reporting with
AMCORDER



Sales Order Processing

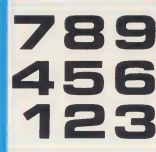
Daily account activity
recording, AMCORDER



Remote Sales Reporting

Daily salesmen's field
reports, with portable
METERCORDER or
COUNTERCORDER

ACCOUNTING



Payables Distribution

Adding machine, calculator
outputs with AMCORDER or
ADAPTOCORDER



Cash Collections

Adding machine, calculator
outputs with AMCORDER or
ADAPTOCORDER



Payroll and Labor Distribution

Time Distributions with
AMCORDER or
ADAPTOCORDER



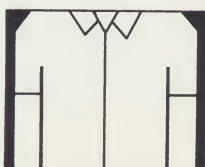
Operating and Tax Reporting

Adding machine and calculator
outputs with AMCORDER
or ADAPTOCORDER



Stockholder Records

Control with AMCORDER,
ADAPTOCORDER



Operating Management

Detailed operating
report for analysis
from computer output

SODA Hardware

General Characteristics—All SODA acquisition devices produce ¼-inch magnetic tape. Data are recorded in binary coded decimal packed in a density of 16 characters per inch to assure a high degree of signal accuracy. Tape reel word capacity varies by function of each device. Word length for most applications is nine digits and sign.

A METERCORDER®

Portable Magnetic Recorder—The METERCORDER adds the dimension of true portability to the SODA line. Weighing 2½ pounds, this device makes it possible to record data at scattered source locations. All-weather construction makes it perfect for tough outdoor jobs—utility meter reading, land surveying, timber inventory, tank gauge reading, material delivery. Rugged, dependable, easy to operate with minimum instruction... simply set ten rotary switches and activate the record lever. Data are recorded on 60-foot tape reel which contains 960 words of 10 characters each. A built-in test light assures proper battery operation.

B AMCORDER®

Adding Machine/Recorder—A magnetic tape recorder combined with a ten-key adding machine, the AMCORDER is both a data acquisition and a data reduction device. For data acquisition, it permits rapid entry thru the 10-key digital keyboard, producing magnetic tape as well as a hard copy. A full ten-character word, with function codes, is written on tape during the motor bar cycle—without time lag. For data reduction, the AMCORDER summarizes information through adding machine totals, prints permanent documents in various formats, and provides the magnetic tape as a file for further processing. Accuracy and reliability are inherent in the system since...

1. The keyboard arrangement is conducive to accuracy of touch.
2. The printed tape offers a ready means of visual verification when an error is sensed.
3. Magnetic tape recording is inherently reliable and free of maintenance, compared to electro-mechanical methods.
4. The tape itself is recorded at low-density with high signal intensity, to avoid critical packing.
5. Computer speed is utilized by programmed routines to accomplish the desired parity functions, validity tests, and control totals.

Experience shows the net error rate for AMCORDER and operator is approximately .002—meaning two errors per 10,000 characters get through to the edit phase of processing where they are isolated for correction.

Available in both single position and shuttle carriage models. Tape reel (5") contains 12,000 words.

C COUNTERCORDER®

Mobile Magnetic Recorder—This mobile, battery-powered hand-operated entry device offers the same magnetic recording capability as all SODA equipment, while extending the usage range to applications where speed of entry and portability are combined prime factors. An ideal inventory taking device, the COUNTERCORDER is also used for recording in delivery or maintenance vehicles. 3500 digital word entries can be recorded on the 3-inch tape reel. Operation is simple: data are entered on the keyboard, the record lever activated, and the keyboard is cleared by pressing the palm-operated clear bar.

D ADAPTOCORDER®

Flexible Magnetic Recorder—SODA system versatility is broadened to include a wide variety of applications with the ADAPTOCORDER. Attached to an office machine with appropriate electromechanical matrix, the ADAPTOCORDER produces digital magnetic record of data entered in the host machine. 6000 ten-digit word entries can be recorded on one reel of tape. This device can be interfaced with certain machines to capture adding machine output, cash register data, event recording, position indicator recording, comptometer and calculator output.

E THE INTERPRETER®

A ¼-inch magnetic tape reader... may be on-line to the computer under program control or off-line as a free-standing tape-to-tape converter. The INTERPRETER reads the ¼-inch magnetic tape and translates the four-channel data format into the language of the computer that is to process the data.

Typically the data read from ¼-inch tape are edited and written on ½-inch tape in the mode of the particular tape drive being used. Optionally, writing may be on magnetic disc. A simultaneous high-speed printer listing may also be obtained, under program control. If used off-line with a ½-inch slave tape drive, the necessary instructions and control functions are wired-in to the INTERPRETER itself.

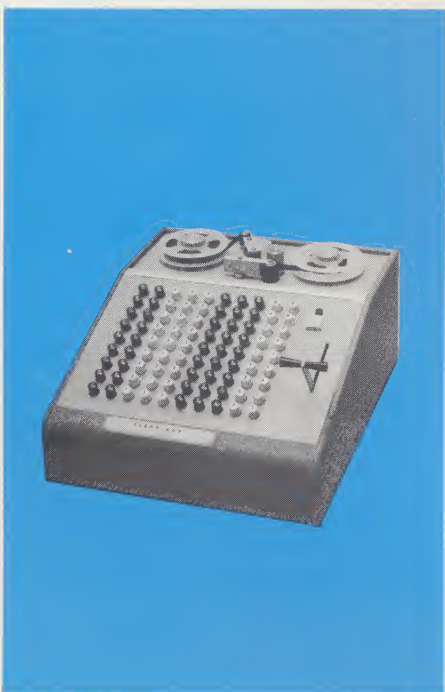
Operating features of the INTERPRETER include fast rewind at approximately 120 inches per second, controlled by a switch on the INTERPRETER console. This feature may be used even when the INTERPRETER is logically disconnected from the computer, leaving the computer free for other work while rewinding is accomplished.



A



B



C



D



E

SODA Medium: Magnetic Tape

The recording medium employed by UGCI SODA Instruments is the natural external communication medium of electronic computers. Its advantages may be summarized as follows:

- **Fast data transfer**
- **Compact information storage**
- **Physical mobility**
- **Reliability vs. mechanical media**
- **Re-usability**
- **Resulting in lower cost per unit of data**

The 1/4-inch magnetic tape (1 mil, mylar) supplied by UGCI is a relatively high output tape having a special oxide formulation for recording uniformity. Recording is in a low-density mode, contributing further to reliability. Finally, the computer itself performs a parity function during the edit phase of processing.

The 1/4-inch magnetic tape is available in various sized reels up to 5 inches, accommodating up to 12,000 ten-digit words per reel. The tapes are commonly re-used hundreds of times.

SODA User Support by UGC Instruments, Inc.

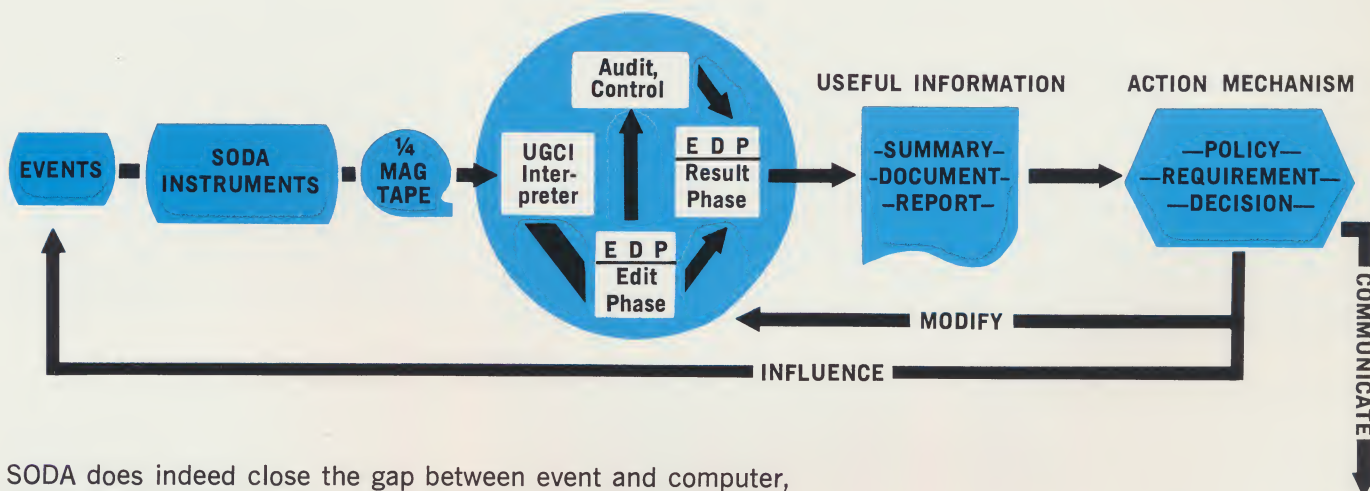
Complete systems feasibility studies and operating procedures for SODA users are provided by UGC Instruments, Inc. engineering department. Installation and staff training programs are personally supervised by servicing field engineers, who are on call for the life of the system for service and liaison with the UGCI Customer Service Department. Service centers are located in principal cities throughout the United States.

SODA Performance:

Reduce Information Lag Time

Monumental advances in electronic processing have been achieved during the past decade. Today's urgent **need** is to parallel this processing capability with economical, realistic, and efficient acquisition technique.

The SODA line was conceived to meet this need . . . to help eliminate the data bottleneck. In the mainstream information flow, SODA compresses the time frame between event and printout.



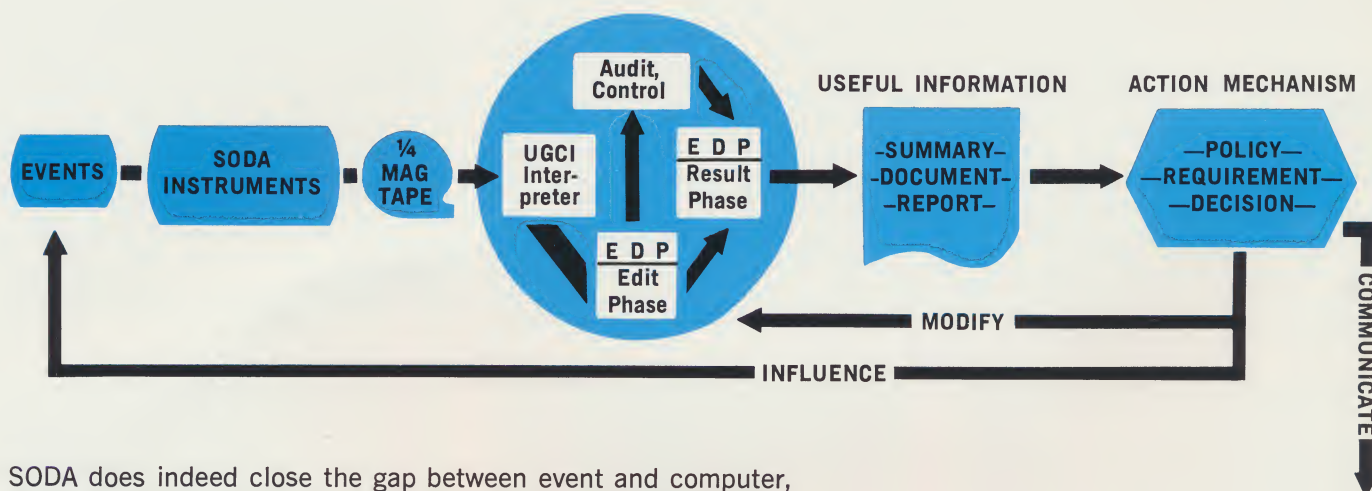
SODA does indeed close the gap between event and computer, by providing a new system which gives you devices to capture data at or near the source; in highly reliable medium compatible with electronic processing; through convenient and speedy digital entry; at a cost less than more cumbersome methods.

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UGC Instruments, Inc.

A Subsidiary of United Gas Corporation

5610 Parkersburg Drive

Houston, Texas 77036

Phone 713 / SU 2-3030

REGIONAL MARKETING OFFICES

Eastern Region Headquarters

1580 Lemoine Ave.

Fort Lee, New Jersey 07024

Phone: 201/947-4100

Gulf Southwestern Headquarters

3322 Richmond Avenue

Houston, Texas 77006

Phone: 713/JA 3-3656

Midwestern Region Headquarters

17700 Northland Park Court

Southfield, Michigan

Phone: 313/353-6040

Western Region Headquarters

6151 W. Century Blvd.

Los Angeles, California 90045

Phone: 213/776-1037